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Lukin, J.A., S. Simizu, N.S. VanderVen and S.A. Friedberg
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Kremer, R.K., U. Beck, P. Fischer and A. Simon
Antiferromagnetic ordering in the frustrated one-dimensional chain system Tb_2Cl_3: A powder neutron diffraction study 1679

Butera, A., M.T. Causa, M. Tovar, S.B. Oseroff and S.-W. Cheong
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ESR study of high and low field phases of spin-Peirls system $CuGeO_3$ 1685

Tchernyshyov, O., A.S. Blaer, A. Keren, K. Kojima, G.M. Luke, W.D. Wu, Y.J. Uemura, M. Hase, K. Uchinokura, Y. Ajiro, T. Asano and M. Mekata
Spin-Peierls and spin-glass phases in pure and doped $CuGeO_3$: a μSR study 1687

Arai, M., M. Fujita, K. Ubukata, H. Ohta, M. Motokawa, T. Otomo, K. Ohyama, M. Mino, J. Akimitsu and O. Fujita
Structural evolution of spin-Peierls material $CuGeO_3$ studied by neutron scattering 1689

Hase, M., Y. Sasago, K. Uchinokura, G. Kido and T. Hamamoto
Effect of substitution on magnetic properties of $CuGeO_3$ 1691

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Ground state selection in a Kagomé antiferromagnet 1693

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The quantum 2-D XXZ ferromagnet 1703

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Valkonet, J.P.G., A.G. Schins, A.F.M. Arts and H.W. de Wijn
Aging in two-dimensional random-exchange Ising ferromagnets 1707

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Magnetic order of two-dimensional isotropic dipolar antiferromagnets 1709

Bartolomé, F., J. Bartolomé, R.L. Oushoorn, O. Guillou and O. Kahn
3D ordering of the rare earth-molecular based magnets $RE_2(ox)[Cu(pba)]_3[Cu(H_2O)_5] \cdot 20H_2O$ (RE = Gd, La) 1711

Ramirez, A.P., A.G. Schins, A.F.M. Arts and H.W. de Wijn
Specific-heat study of the two-dimensional frustrated ferromagnet $Rb_2Cu_{1-x}Co_xF_4$ 1713

Schins, A.G., M. Nielsen, A.F.M. Arts and H.W. de Wijn
Neutron scattering study of the two-dimensional random-exchange antiferromagnet $Rb_2Cu_{0.12}Co_{0.88}F_4$ 1715

Murasik, A., P. Fischer and A. Zygmunt
$Ba_2(UCu)O_6$ – a two-dimensional antiferromagnet? 1717

Le Bideau, J., C. Payen, B. Bujoli, P. Palvadeau and J. Rouxel
A new family of 2D antiferromagnets: the layered phosphonates $M^{II}(RPO_3) \cdot H_2O$; M = Mn, Fe, Co, Ni; R = alkyl, phenyl 1719

Djurberg, C., J. Mattsson, P. Nordblad, L. Hoines and J.A. Cowen
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Gonçalves, J.R., J. Poulter and J.A. Blackman
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Wilamowski, Z. and T. Story
The ground state of a magnetic impurity determined by the hybridization with conduction band 1731

Wilamowski, Z., H. Przybylinska and W. Jantsch
Nonuniform spin relaxation mechanisms 1733

Novák, P.
Anisotropy of exchange interaction in intermetallic rare-earth compounds 1735

Turov, E.A.
Antiferromagnets: peculiarities in transport, optics, acoustics and acousto-optics 1737

Menshenin, V.V., I.F. Mirsaev and E.A. Turov
New effects of gigantic elastic anharmonicity in antiferromagnets 1739

Matveev, V.M., V.V. Manuilov and V.V. Matveev
Anomalous X-ray magneto-optics of spiral magnetic structures 1741

Brückel, Th., M. Lippert, Th. Köhler, J.R. Schneider and W. Prandl
The non-resonant magnetic X-ray scattering cross section of MnF_2 1743

Nakayama, K., N. Achiwa, M. Fujino, N. Matsugaki and K. Yamagata
Weak ferromagnetism of $Co(HCOO)_2 \cdot 2H_2O$ and $Co(HCOO)_2 \cdot 2(NH_2)_2CO$ 1745

Kambe, K.
Magnetic susceptibilities of three and four spin systems 1747

Yamada, Y., S. Miyashita, T. Horiguchi, M. Kang and O. Nagai
Spin-ordering of the antiferromagnetic Ising model with general spin S on a triangular lattice 1749

Takeuchi, J., K. Murakami, I. Hiromitsu and T. Ito
Magnetic phase transitions in triangular-lattice antiferromagnetic mixed crystals $CsNi_{1-x}M_xCl_3$ (M = Co, Fe) 1751

Regueiro, M.D.N. and C. Lacroix
Relevance of the anisotropy in itinerant frustrated antiferromagnets 1753

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Relaxation dynamics in FeNiCr: A random trap analysis 1755

Saito, T., H. Miyano, K. Shinagawa and T. Tsushima
Effect of coherent anisotropy on the H–T phase diagram of random anisotropy magnets of amorphous DyGdFe 1757

Chattopadhyay, T., Th. Brückel, D. Hohlwein and R. Sonntag
Magnetic diffuse scattering from the frustrated antiferromagnet MnS_2 1759

Hamasaki, T. and H. Kubo
Proton NMR study of antiferromagnetic mixture $(CH_3)_3NHCo_{1-x}Ni_xCl_3 \cdot 2H_2O$ 1761

Harris, M.J., M.P. Zinkin, Z. Tun, B. Wanklyn and I. Swainson
A single crystal neutron scattering study of a highly frustrated pyrochlore 1763

Tamine, M., M. Nogues, J.L. Dormann and J.M. Grenèche
Magnetic clustering phenomena in a crystalline mixed ferric fluoride: $Fe_{0.67}Cr_{0.33}F_3$ 1765

Mekata, M., T. Asano, T. Sugino, H. Nakamura, N. Asai, M. Shiga, A. Keren, K. Kojima, G.M. Luke, W.D. Wu, Y.J. Uemura, S. Dunsinger and M. Gingras
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Laiho, R. and K.G. Lisunov
Low-field magnetic properties of $(Zn_{1-x}Mn_x)_3As_2$ 1771

DeFotis, G.C., C.C. Cinquina, K.L. Beers and W.R.A. Jarvis
Magnetism and spin glass behavior of $FeCl_2 \cdot H_2O$ 1773

Mirebeau, I., G. Iancu, G. Gavoille and J. Hubsch
Neutron diffraction in a frustrated ferrite 1775

Kato, T., T. Ishimi, K. Machida, T. Mitsui and K. Iio
Birefringence measurement of the field-induced IC–C phase transition in $RbMnBr_3$ 1777

Kawasaki, K., C. Sasaki and R. Tahir-Kheli
Spin dynamics of frustrated paramagnets 1779

Sato, T., T. Ando, T. Oku, S. Morimoto and A. Ito
Mössbauer study of the reentrant spin-glass phase of $Ni_{76}Fe_1Mn_{23}$ 1781

Ando, T., H. Yanagihara, T. Sato and E. Ohta
Nonlinear susceptibility of the reentrant spin glass NiMn 1783

Sato, T., T. Ando, T. Oku and M. Furusaka
Helical-spin-glass reentrant transition in itinerant electron type magnet $Cr_{1-x}Mn_xGe$ 1785

Muneta, S., S. Maegawa, A. Oyamada, T. Goto and Y. Oohara
^{87}Rb NMR study of the triangular lattice antiferromagnet $RbNiCl_3$ 1787

Maegawa, S. and H. Tanaka
Spin fluctuation in a triangular lattice antiferromagnet $CsNiBr_3$ studied by NMR 1789

Kim, T.H., A. Dinia and M.C. Cadeville
Magnetic properties of $Co_{1-x}M_xPt_3$ (M = Mn, Fe) compounds with competing interactions 1791

Vogel, E.E., S. Contreras, W. Lebrecht and J. Cartes
Order parameters for various Ising lattices with competing $\pm J$ interactions 1793

Kessler, M., J. Déportes, B. Ouladdiaf and F. Sayetat
Magnetic properties of $Sc_xTi_{1-x}Fe_2$ 1795

Brückel, Th., M. Lippert, H. Kubo, K. Zenmyo, H.M. Mayer, F. Pfeiffer, D. Hohlwein and A. Krimmel
Magnetic structure and phase transitions of $Co_{1-x}Mn_xCl_2 \cdot 2H_2O$ and $Co_{1-x}Mn_xCl_2 \cdot 2D_2O$ 1797

Bazhan, A.N. and V.N. Bevz
Magnetic properties of antiferromagnetic $Ni_{1-x}Mg_xF_2$ and $Ni_{1-x}Zn_xF_2$ single crystals 1799

Kato, H., K. Iwai, A. Ito and Y. Nakagawa
Spin-glass-like behavior in the diluted antiferromagnet $Fe_xMg_{1-x}TiO_3$ near the percolation concentration 1801

Zinkin, M.P. and M.J. Harris
Local mean field calculation of the frustrated pyrochlore spin structure 1803

Goveas, N. and G. Mukhopadhyay
Study of Heisenberg ferrimagnets using a constant coupling method for a cluster 1805

Borras-Almenar, J.J., J.M. Clemente, E. Coronado, R. Georges, H. Kishinevsky, S.I. Klokishner, S.M. Ostrovskii, A.V. Palii and B.S. Tsukerblat
Magnetic and vibronic interactions in mixed-valence clusters: a general approach based on the angular momentum theory 1807

Borras-Almenar, J.J., E. Coronado, J.R. Galan-Mascaros and C.J. Gómez-García
High-nuclearity magnetic clusters: magnetic interactions in clusters encapsulated by molecular metal oxides 1809

Itoh, M., I. Natori, S. Kubota and K. Motoya
Hole-doping effect on magnetic properties of $La_{1-x}Sr_xCoO_3$ $(0 \leq x \leq 0.5)$ 1811

Blasco, J., J. García, F.J. Lázaro and M.G. Proietti
Spin-glass behaviour in the $NdNi_{1-x}Co_xO_3$ system 1813

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Tejada, J. and X. Zhang
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Magnetic tunneling (*Invited Paper*) 1821

Barbara, B., W. Wernsdorfer, L.C. Sampaio, J.G. Park, C. Paulsen, M.A. Novak, R. Ferré, D. Mailly, R. Sessoli, A. Caneschi, K. Hasselbach, A. Benoit and L. Thomas
Mesoscopic quantum tunneling of the magnetization (*Invited Paper*) 1825

Squire, P.T.
Domain model for magnetoelastic behaviour of uniaxial ferromagnets 1829

Kolchanov, A.V. and E.A. Turov
On nonlinear magnetoelastic dynamics of domain walls 1831

Wajdwicz, A. and R.A. Kosiński
Numerical simulations of Bloch lines generation by in-plane field pulses 1833

Durin, G., A. Magni and G. Bertotti
Fractal properties of the Barkhausen effect 1835

Augustyniak, B. and J. Degauque
New approach to hysteresis process investigation using mechanical and magnetic Barkhausen effects 1837

Elmer, F.-J.
A model for Barkhausen noise 1839

Parakka, A. and D.C. Jiles
Magneprobe: A portable system for non-destructive testing of ferromagnetic materials 1841

Rueda, R., R. Ramírez, J. González, L. Domínguez and J.M. González
Collective demagnetization processes in systems of exchange coupled grains 1843

Ohkoshi, M., K. Utsunomiya and K. Tsushima
Analysis by magnetic phase grating model for domain wall observation 1845

González, J.M., R. Ramírez and R. Rueda
From metastable to stable states in a magnetic system with many degrees of freedom 1847

Sobolev, V.L. and H.L. Huang
New equations for the domain wall dynamics 1849

Arnaudas, J.I., C. de la Fuente and A. del Moral
Scaling analysis of magnetic relaxation and magnetization quantum tunneling in amorphous Tb_2Fe 1851

Zhang, X.X., R. Ziolo, E.C. Kroll, X. Bohigas and J. Tejada
Magnetic relaxation and quantum tunneling in nanocrystalline particles 1853

Porteseil, J.L. and O. Geoffroy
Wall pinning by nanocrystals in an amorphous matrix 1855

Appino, C., C. Beatrice, E. Ferrara and F. Fiorillo
Energy losses and magnetization curve in field annealed amorphous ribbons 1857

Roos, P. and B. Barbara
Numerical calculation of a domain wall junction 1859

Ferré, R. and B. Barbara
Magnetisation studies of disordered systems: Importance of adiabaticity in non-equilibrium processes 1861

Marchand, A., L.C. Sampaio and B. Barbara
Numerical test of the exponential cut-off in single-variable scaling for magnetic relaxation 1863

Khapikov, A., L. Uspenskaia and V. Vlasko-Vlasov
Diffusion-damped Bloch lines motion and their influence on the domain wall relaxation 1865

Aroca, C., E. López, M. Maícas, M.C. Sánchez and P. Sánchez
Anomalous domain wall displacement in amorphous samples under transversal magnetic fields 1867

de Albuquerque, M.P. and P. Molho
Evolution of a magnetic cellular pattern under field cycles 1869

Sablik, M.J., H. Kwun and G.L. Burkhardt
Biaxial stress effects on hysteresis and MIVC 1871

Malang, M., D. Garanin and J. Kötzler
Strong critical fluctuations in domain walls in Sr hexaferrite: Effect of magnetic fields 1873

Chicinaş, I., N. Jumate and Gh. Matei
Influence of residual internal stresses on the coercive field of soft magnetic powders 1875

Thiaville, A.
The demagnetizing field inside a domain wall 1877

Okuno, H., Y. Sugitani and K. Hirata
Bifurcation diagram and power spectrum of chaotic domain-wall motion 1879

Jiles, D.C. and M.K. Devine
The law of approach as a means of modelling the magnetomechanical effect 1881

Tatara, G. and H. Fukuyama
Macroscopic quantum tunneling of a domain wall in metallic ferromagnets 1883

Olive, E., P. Molho and J.L. Porteseil
Dipolar interactions in 2D lattices 1885

Liorzou, F., A.M. Konn and M. Le Floc'h
A common expression for both direct and inverse magnetization curves in soft ferrites 1887

Cesena, M., M. Schepke, M.A.C. de Melo, F.J. Litterst and G. Amthauer
Mössbauer studies of Mn- and Al-doped synthetic ilvaites 1889

Paulsen, C., J.-G. Park, B. Barbara, R. Sessoli and A. Caneschi
Studies of hysteresis in $Mn_{12}Ac$ 1891

Aharoni, A. and J.P. Jakubovics
Structure of moving domain walls 1893

Zubov, V.E., A.D. Kudakov, N.L. Levshin and V.V. Pilipenko
Influence of adsorption–desorption processes on dynamics of 180° domain wall in iron 1895

Strothmann, H. and O. Schaerpf
Determination of Bloch wall thickness in Fe(4 at% Si) single crystals by means of neutron refraction close to the Curie point 1897

Smardz, L., H. Niedoba, B. Mirecki, F. Stobiecki and B. Szymański
Magnetic domains and coercivity transitions in wedged Fe/Zr multilayers 1899

Atkinson, D. and P.T. Squire
Domain structure observations of as-cast and annealed iron-based amorphous wires 1901

Echavarrieta, C., P. Quintana, E. Amano, R. Valenzuela, J. González, N. Murillo and J.M. Blanco
Effects of tensile stress on the domain wall dynamics of Co-based amorphous ferromagnetic wires 1903

Kraan, W.H., V.E. Mikhailova and M.Th. Rekveldt
Neutron depolarisation in Co–Cr films with magnetic field applied in-plane 1905

Kraan, W.H., A. van der Graaf, H. Fredrikze, V.E. Mikhailova and M.Th. Rekveldt
Describing magnetisation and neutron depolarisation of perpendicular Co–Cr film with in-depth varying K_u 1907

Nowak, J.
Origin of hysteresis in thin Nd–Co films 1909

Dolocan, V. and E. Dolocan
Magnetic field dependence of the permeability in amorphous magnetic materials 1911

Squire, P.T., S.N. Hogsdon and D. Atkinson
The use of high-resolution ΔE measurements to study domain processes in soft ferromagnets 1913

Wysłocki, J.J., W. Suski, P. Pawlik and K. Wochowski
Torque measurements and magnetic domain structure of UFe_9AlSi_2 intermetallic compound 1915

Huang, H.L. and J.J. Lu
Textural and sweep rate effects on transverse susceptibility of magnetic particles 1917

Torres, L., M. Zazo, J. Iñiguez, C. de Francisco and J.M. Muñoz
Disaccommodation spectra of single crystal nickel ferrites 1919

Chizhik, A.B. and S.L. Gnatchenko
Drift and nucleation of magnetic domains in weak ferromagnet $DyFeO_3$ 1921

Kisielewski, M., A. Maziewski and J.M. Desvignes
Domain structure shape memory in a magnet with magnetization induced anisotropy 1923

Paduan-Filho, A., C.C. Becerra, V.B. Barbeta, Y. Shapira, J. Campo and F. Palicio
Magnetization jumps in the hysteresis curves of the diluted antiferromagnets $A_2Fe_{1-x}In_xCl_5 \cdot H_2O$ (A = K, Rb) 1925

Huang, H.L., C.S. Kuo and Y.D. Hsieh
Fringing field anomaly of a ferrite head at saturation 1927

Dedukh, L.M., Yu.P. Kabanov and V.I. Nikitenko
Behavior of Bloch points in oscillating Bloch lines 1929

Chapter 24. Magnons, solitons and spin fluctuations

Takeno, S. and K. Kawasaki
Stationary and moving self-localized magnons in a Heisenberg chain 1931

de Aguiar, F.M., S.M. Rezende, F.C.S. da Silva and A. Azevedo
Transient spin-wave intermittency 1933

Henn, R., F. Rödelsperger and H. Benner
Controlling unstable periodic orbits in a spin-wave experiment using the OGY scheme 1935

Kang, M. and O. Nagai
Magnon–hole bound states in ferro- and antiferromagnets 1937

Bała, J., A.M. Oleś and J. Zaanen
Spin polarons in the t–t'–J model 1939

Feiner, L.F., A.M. Oleś and J. Zaanen
Quantum fluctuations in d^9 model 1941

Izyumov, Yu.A. and B.M. Letfulov
Spin waves in antiferromagnetic phase in the (t–J)-model 1943

Swirkowicz, R.
Spin waves in thin films composed of ferromagnetic and nonmagnetic materials 1945

Ignatchenko, V.A., R.S. Iskhakov and Yu.I. Mankov
Spin waves spectrum and damping in quasi-periodic multilayers 1947

Yaouanc, A., P. Dalmas de Réotier, P.C.M. Gubbens, F. Kayzel, P. Bonville, J.J.M. Franse and A.M. Mulders
Muon spin relaxation in uniaxial ferromagnets 1949

Elmer, F.-J.
Stationary and turbulent patterns due to spin wave instabilities 1951

Rödelsperger, F., Y.S. Kivshar and H. Benner
Route out of chaos by hf parametric perturbations in spin-wave instabilities 1953

Ohyama, T. and H. Shiba
One- and two-magnon spectra in quasi-one-dimensional triangular antiferromagnets 1955

d'Albuquerque e Castro, J., J. Mathon and R.B. Muniz
Temperature dependence of the local magnetization in ferromagnetic overlayers 1957

Kambe, T., S. Teraoka, N. Koido, S. Hirai, H. Tanaka and K. Nagata
Spin dynamics of triangular antiferromagnet $CsNiCl_3$ 1959

Tanaka, H., T. Kambe and K. Nagata
ESR modes in triangular antiferromagnets 1961

Nikolayev, V.V. and E.A. Turov
Acoustics and AFMR in center-antisymmetric antiferromagnets 1963

Ivanov, N.B. and J. Richter
Spiral phases in easy plane J_1–J_2–J_3 triangular antiferromagnets 1965

Kambe, T., H. Tanaka, S. Kimura, H. Ohta, M. Motokawa and K. Nagata
Magnetic resonance in $CsNiBr_3$ 1967

Hołyst, J.A. and H. Benner
Soliton–magnon bound states in TMMC above and below T_N 1969

Lowden, J.R., P.W. Mitchell, S. Itoh, Y. Endoh and T.G. Perring
High-energy magnetic excitations in the longitudinal spin-density-wave phase of chromium 1971

Jankowska-Kisielińska, J., K. Mikke and J.J. Milczarek
Spin waves in antiferromagnetic fct Mn(17%Ni) alloy 1973

Hirano, Y., N. Suzuki, M. Shirai and K. Motizuki
Spin waves in Mn_3Pt 1975

Zukrowski, J., G. Liu and U. Gradmann
Reduced spin-wave parameters in Fe/Cr(110) interfaces 1977

Spenato, D., A. Fessant, J. Gieraltowski, J. Loaëc and H. Legall
Losses associated with spin dynamics in ferromagnetic thin films 1979

Puszkarski, H., B. Kołodziejczak, A. Akjouj, B. Djafari-Rouhani and L. Dobrzyński
Existence conditions for interface bilayer spin waves 1981

Thomas, L., J. Tuaillon, J.P. Perez, V. Dupuis, A. Perez and B. Barbara
Localization of spin waves in nanocrystallized films of nickel 1983

Jin, Q.Y., H.R. Zhai, Y.B. Xu, Q.S. Bie, M. Lu and Y.H. Shen
Spin wave resonance in CoCr/Cu/CoCr sandwiches 1985

Mekata, M., Y. Ajiro, T. Sugino, A. Oohara, K. Ohara, S. Yasuda, Y. Oohara and H. Yoshizawa
Magnetic ordering in $CsCuCl_3$ 1987

Schmidt, W., C. Brotzeller, P. Schweiss, H. Tietze-Jaensch, R. Geick and W. Treutmann
Magnetic excitations in Co_2SiO_4 1989

Petrakovskii, G.A., K.A. Sablina, A.I. Pankrats, V.M. Vorotinov, A. Furrer, B. Roessli and P. Fischer
Magnetic state and spin dynamics of Bi_2CuO_4 1991

Gubbens, P.C.M., A.A. Moolenaar, P. Dalmas de Réotier, A. Yaouanc, A.A. Menovsky, K. Prokeš and C.E. Snel
Spin dynamics in the commensurate antiferromagnet $PrCo_2Si_2$ probed by muon spin relaxation measurements 1993

Han, Z.-q.
Spin wave modes in inhomogeneous ferromagnetic film at arbitrary magnetic field direction 1995

Krug von Nidda, H.-A., G. Wiese and H. Benner
Critical modes at the first-order Suhl instability in YIG spheres 1997

Mirebeau, I. and M. Hennion
Spin waves anomalies in frustrated insulating ferrimagnets 1999

Żebrowski, J.J. and A. Sukiennicki
Spatial intermittency in a magnetic system with solitons 2001

Skomski, R.
Curie temperature and density of states of quasi-weak ferromagnets 2003

Ueda, K. and T. Moriya
Spin fluctuation spectra and high temperature superconductivity 2005

Chui, S.T.
Fluctuation effects in ultrathin films 2007

Shiga, M., H. Nakamura, M. Nishi and K. Kakurai
Damping of spin fluctuations of β-Mn by a non-magnetic impurity: neutron and NMR studies 2009

Amaral, V.S. and B. Barbara
Localization induced spin fluctuations in amorphous $Y_{1-x}Ni_x$ 2011

Burzo, E.
Spin fluctuations in cobalt rare-earth compounds 2013

Chapter 25. Magnetic semiconductors and superconductors

Koroleva, L.I., Ja.A. Kessler, A.G. Odintsov, M.Kh. Mashaev, M.G. Mikheev, D.A. Saifullaeva and D.S. Filimonov
New magnetic semiconductors with spinel structure containing Cu, Cr, Sb, Zn, Mn and S 2015

Mimura, K., H. Sato, J. Harada, K. Miyazaki, M. Taniguchi and Y. Ueda
Mn 3d states of $Cd_{1-x}Mn_xTe$ 2017

Laiho, R., A.V. Lashkul, K.G. Lisunov, V.N. Stamov, E. Lähderanta and V.S. Zahvalinski
Vacancy-type disorder in $(Zn_{1-x}Mn_x)_3As_2$ 2019

Laiho, R., K. Lisunov, V. Stamov and V. Zahvalinsky
Magnetoresistance of $(Zn_{1-x}Mn_x)_3As_2$ in region of hopping conductivity 2021

Palacio, F., J. Campo, V. Sagredo, G. Attolini and C. Pelosi
Spin-glass behaviour in $Zn_{1-x}Mn_xIn_2S_4$ spinels 2023

Lubecka, M., L.J. Maksymowicz, W. Powroźnik and E. Urbaniec
Thin films of $CdCr_{2x}In_{2-2x}Se_4$ obtained from a multilayer structure of Cr/CdCrInSe/Cr 2025

Irie, Y., T. Sato and E. Ohta
Weak ferromagnetic behavior of $Cd_{1-x-y}Mn_xFe_y$ Te ($y \sim 0.01$) 2027

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